

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A ceramic member for a centrifugal sintering device, which is a member consisting of a rotor, a shaft or a sample holder to be used in a centrifugal sintering device imparting a centrifugal force field to and ~~a temperature field to~~ indirectly heating a molded body of ceramics or metal powder or a ceramic precursor film by selectively causing only the rotor and/or the sample holder to self heat using an induction heating device, ~~wherein~~ the rotor which turns the sample holder, the shaft or the sample holder is composed of ceramics, and ~~wherein~~ these rotor, shaft and sample holder undergo no thermal deformation and are not damaged by thermal stress when subjected to centrifugal force of 10 to 700,000 G under conditions of atmospheric temperatures of 300 to 1200°C, wherein said rotor which turns said sample holder and/or said sample holder are composed of conductive silicon carbide ceramics.

2. (Currently Amended) The ceramic member according to claim 1, wherein ~~the rotor which turns said sample holder and the~~ said shaft ~~[[are]]~~ is composed of silicon nitride or silicon carbide ceramics.

3. (Canceled)

4. (Currently Amended) The ceramic member according to claim 1 ~~or 2~~, wherein said rotor which turns said sample holder is composed of ~~a material having a large dielectric loss, and the sample is heated indirectly by selectively heating only the sample holder using dielectric heating means~~ conductive silicon carbide ceramics.

5. (Currently Amended) The ceramic member according to claim ~~[[4]]~~ 1, wherein

said sample holder is composed of conductive silicon carbide ceramics.

6. (Currently Amended) A centrifugal sintering system comprising the ceramic member according to any one of claims ~~1 through 5~~ 1, 2, 4 and 5 as a constituent element.

7. (New) A ceramic member for a centrifugal sintering device, the centrifugal sintering device being configured to impart a centrifugal force to and indirectly heat a sample using an induction heating device, said ceramic member comprising:

a sample holder, a rotor, or a shaft,

wherein said sample holder, said rotor, or said shaft is configured to not thermally deform and to not be damaged by thermal stress when subjected to centrifugal force of 10 to 700,000 G under conditions of atmospheric temperatures of 300 to 1200°C, and

wherein said sample holder, said rotor, or said shaft is composed of silicon carbide ceramics.

8. (New) The ceramic member according to claim 7, wherein said ceramic member is said rotor, and wherein said rotor is composed of conductive silicon carbide ceramics.

9. (New) The ceramic member according to claim 7, wherein said ceramic member is said sample holder, and wherein said sample holder is composed of conductive silicon carbide ceramics.

10. (New) A centrifugal sintering device comprising:

a sample holder configured to hold a sample;

a rotor attached to said sample holder;

a shaft attached to said rotor;

a rotation device configured to rotate said shaft and impart a centrifugal force to said

shaft, said rotor, and said sample holder; and

an induction heating device configured to indirectly heat the sample,

wherein said sample holder, said rotor, or said shaft is composed of silicon carbide ceramics.

11. (New) The centrifugal sintering device according to claim 10, wherein said rotor is composed of conductive silicon carbide ceramics.

12. (New) The centrifugal sintering device according to claim 11, wherein said induction heating device is configured to indirectly heat the sample by causing only said rotor to self heat by induction heating.

13. (New) The centrifugal sintering device according to claim 10, wherein said sample holder is composed of conductive silicon carbide ceramics.

14. (New) The centrifugal sintering device according to claim 13, wherein said induction heating device is configured to indirectly heat the sample by causing only said sample holder to self heat by induction heating.

15. (New) The centrifugal sintering device according to claim 10, wherein said rotor is composed of silicon nitride.

16. (New) The centrifugal sintering device according to claim 15, wherein said shaft is composed of silicon nitride.

17. (New) The centrifugal sintering device according to claim 10, wherein said shaft is composed of silicon nitride.

18. (New) The centrifugal sintering device according to claim 10, wherein said sample holder, said rotor, or said shaft is configured to not thermally deform and to not be

Serial No. 10/540,875

Reply to Office Action of May 17, 2007

damaged by thermal stress when subjected to centrifugal force of 10 to 700,000 G under conditions of atmospheric temperatures of 300 to 1200°C.